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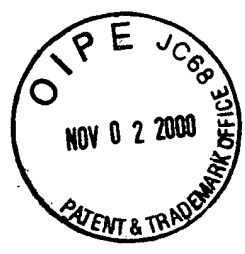
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Tomasz DUCZMAL et al.

Serial No: 09/535,979

Filed: March 27, 2000



Group Art Unit: 2773

Examiner: Unassigned

For: METHOD AND SYSTEM FOR DYNAMIC DISPLAY OF MARKETING CAMPAIGNS ON DISPLAY LOCATIONS VIA A NETWORK

**SUBMISSION OF CERTIFIED COPY OF PRIOR FOREIGN APPLICATION IN ACCORDANCE WITH THE REQUIREMENTS OF 37 C.F.R. §1.55**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 C.F.R. §1.55, Applicants submit herewith a certified copy of the following foreign application:

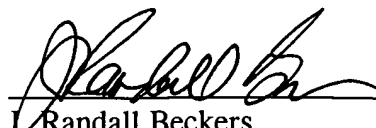
Canadian Patent Application No. 2,293,556

Filed: December 17, 1999

It is respectfully requested that Applicants be given the benefit of the foreign filing date as evidenced by the certified papers attached hereto, in accordance with the requirements of 35 U.S.C. §119.

Respectfully submitted,  
STAAS & HALSEY LLP

Date: 11/2/00

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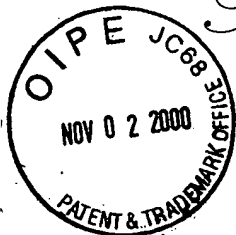


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Specification and Drawings, as originally filed, with Application for Patent Serial No:  
**2,293,556**, on December 17, 1999, by **TOMASZ DUCZMAL AND DAVID M.  
ROSCOE**, for "Apparatus and Method of Generating a Dynamic Image on Billboards and  
Poster Displays".

*L. Régimbald*  
Agent certificateur / Certifying Officer

April 12, 2000

Date

Canada

(CIPO 68)

OPIC



CIPO

## **Apparatus and method of generating a dynamic image on billboards and poster displays.**

Inventor: Tomasz Duczmal, David M. Roscoe

Oakville, Nov 6, 1999

### **Field of invention**

This invention relates to a method and apparatus for generating dynamic message to be displayed on billboards and posters. More particularly, the method uses computer software and hardware to store, distribute and schedule the display of multimedia promotional material on billboards and posters. Current billboards use static information, usually in form of a printed image/picture and text. This media is replaced by dynamic information utilizing multimedia technology. A billboard site is converted to a node on a computer network. The central location of this network, stores the images and multimedia material in a database. The controller uploads these images to a specific location to be displayed by the node. The scheduler and database are accessed via an Internet web site to manage requests and process transactions.

### **Background of the invention**

In today's economy advertising and promotions play a significant role in marketing campaigns. One of the means to deliver promotional messages is the use of billboards and posters located in public places. This requires a long and inefficient process, involving graphic designers, printing houses, advertising agencies and billboard owners. The effectiveness of these marketing tools i.e. billboards/posters heavily depends on the timing, graphical form and attractiveness of the message presented. There are several disadvantages of this form of media:

1. The display is static where one site is occupied by the same material for a long duration of time.
2. The content displayed on the billboards and posters is difficult to change – logistics of putting new content is complicated involving several parties which raise the cost and extend the time from conception to actually displaying poster. (i.e. a new printed poster to be installed over the old one)
3. There is no means for quick response to market fluctuations on particular campaigns by updating content of the billboards/posters.
4. One location can be only used by only one client.

Therefore, an important addition to the art would occur if a method and apparatus is developed to effectively deliver a dynamic message, and display content in real time.

## Brief description of the drawings

Fig. 1 Hardware block diagram of the system.

Fig. 2 Software block diagram of the system.

## Detailed description of preferred embodiments

As readers skilled in the art will recognize, this invention has a wide range of applications. The following example of billboards is for illustrative purposes only, and does not suggest that the invention is restricted to this application. Details of the hardware and software may vary; however, the essence of the invention and the underlying methodology remains constant: replacing a static image on the billboard by delivering and displaying a dynamic, multimedia information tailored to marketing strategy using the internet as a delivery model.

## System description

A preferred embodiment is illustrated on Fig. 1, and is comprised of a multiplicity of billboards (1) at Locations. Billboard is a space to display promotional material and uses a Display device (2), which is connected to a Node (3). Display devices are industry standard computer video displays and can be in the form of LCD panels, LED panel, projector device utilizing Digital Light Processing unit or CRT. Node (3) enables communication with Controller (4) and displays the digital material stored locally in the Node memory. The content and timing of displayed material is exclusively managed by communication with Controller (4). Controller (4) is connected to the Internet, enabling access to the content being displayed on many billboards by many Users. (5).

Fig. 2 represents the software configuration to deliver desired functionality. A Node at the Location is a diskless station, bootable from network with operating system (6), software running applications for multimedia, display, local scheduler/timer, storage, network connections and monitoring display content via central controller.

On the Controller (7) site, eight major applications enable desire functionality. Distribution Engine (8) uploads advertising material and timing information to a Node site and monitors the status of a Node. Global Scheduler (9) maintains and tracks available time slots on all nodes. It is the main source of information to determine where and when time slots for display are available. Transaction System (10) enables payments, cancellations, and status tracking. Monitoring System (11) allows the real time view of the contend displayed on a specific billboard site. Users can check if the contracted material is displayed at the contracted time and see what material is displayed before and after. Location Identifier (12) is a reporting tool which allows the user to search database for description, statistics and technical information on the site. It utilizes a Geographic Information System. All applications use data stored in the Central Data Warehouse (13). Applications engines (14) are accessed through Web Server (15) by ether Administrator (16) or through Firewall (17) by Web Client (18).

**Method description**

An advertiser creates digital image and/or multimedia material promoting clients' goods or service. When content approval process is concluded, advertiser logs in to the system via web browser. His identity is verified by checking password. Once logged in he will search the locations and available time slots on billboards or posters belonging to the system. He accesses demographic, technical, pricing and statistic data describing a Location through the Location Identifier. He picks locations and time slots, which suits his marketing campaign. A Transaction System sends quotation in real time. Client can accept offer and Transaction System completes contract. It transfers funds, reserves time slot using Global Scheduler and prompts client to upload his material. Client uploads his material to Data Warehouse. Distribution Engine checks uploaded material for technical integrity and prompts Administrator to check material for content integrity. When material is reviewed and approved by Administrator, Distribution Engine uploads file and timing information to desired Node. At the Node site, the Local Scheduler triggers the Multimedia software to run desired package from a local Storage. A Local Monitor tracks ID of files actually being displayed and sends this information to the Monitoring System of the Controller in real time.

An owner of the advertising material (User) can log in with a different set of privileges. Using the Monitoring System they can see what is displayed on the Node that is contracted. On the Users's request, the Monitoring system can retrieve from the Central Data Warehouse the file being displayed on the specific site and send it to the User's browser. This gives him a feedback about the context in which his material is being promoted.

Fig 1. Hardware block diagram

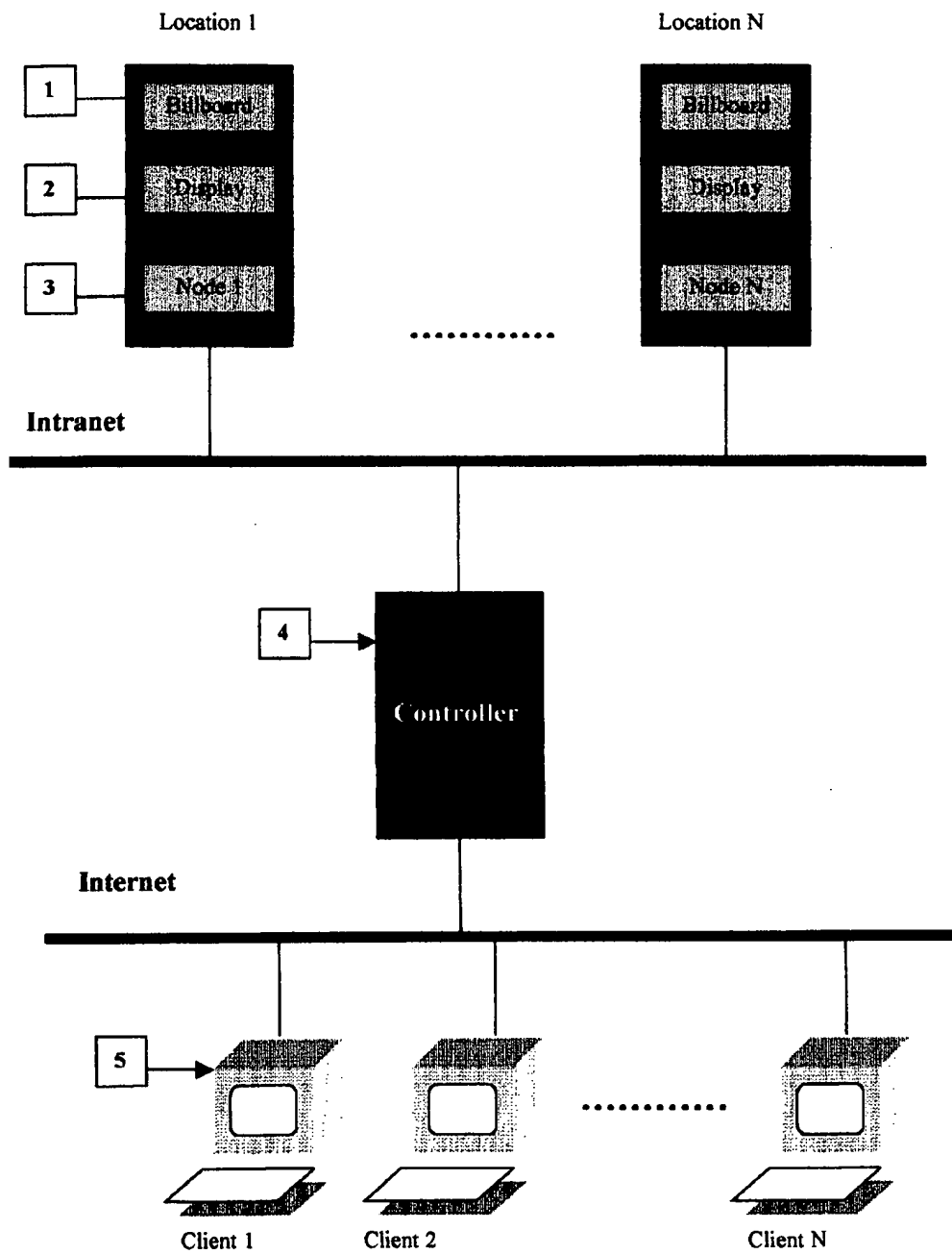


Fig 2. Software block diagram.

